

ABSTRACT OF THE DISCLOSURE

A method of automatically translating an opcode summary table into an Architecture Description Language ("ADL") can be employed to efficiently design and test a microprocessor instruction set. An opcode summary table is analyzed and code is generated in an ADL. The generated code can be optimized by first analyzing the opcode summary table to find groupings and sub-groupings of instructions based on similarities. The optimized code can be generated by first generating code for common elements within the sub-group, then generating code for each instruction within the sub-group. This process would be repeated for each group in the opcode summary table. The result is an ADL description of the opcode summary table.